

CLAIMS

1. Human anti-idiotypic antibody Fab or scFv fragment, characterized by the ability to mimic Her-2/neu tumor associated antigen.
2. The fragment of claim 1, that comprises a sequence SEQ ID No: 3 in the 5 CDR3 region of the V<sub>H</sub> domain and a sequence SEQ ID No: 4 in the CDR3 region of the V<sub>L</sub> domain.
3. The fragment of claim 1, that comprises a sequence SEQ ID No: 5 in the CDR3 region of the V<sub>H</sub> domain and a sequence SEQ ID No: 6 in the CDR3 region of the V<sub>L</sub> domain.
4. The fragment of any of claims 1 to 3, which is directed against 10 trastuzumab F(ab')<sub>2</sub>.
5. The fragment of claim 2, which comprises the aminoacid sequence SEQ ID No:1, this fragment being designated scFv 40.
6. The fragment of claim 3, which comprises the aminoacid sequence SEQ 15 IDNo:2, this fragment being designated scFv 69.
7. A multimer of the antibody fragment defined in any of claims 1 to 6.
8. A pharmaceutical composition comprising an antibody fragment according to any of claims 1 to 6, or a multimer thereof according to claim 7, in association with a pharmaceutically acceptable carrier.
9. An *ex vivo* method for preparing antigen-presenting cells (APCs) useful 20 for inducing Her-2/neu-specific protective antitumor immunity, which method comprises contacting an antigen-presenting cell with an anti-idiotype antibody fragment according to any of claims 1 to 6.
10. The method of claim 9, wherein the APC is a dendritic cell.
11. An isolated APC prepared according to the method of claim 9 or 10.
- 25 12. Use of an antibody fragment according to any of claims 1 to 6, or a multimer thereof according to claim 7, for the preparation of a medicament for the prevention or treatment of a tumor wherein Her-2/neu is overexpressed.
13. Use of the APC of claim 11 for the prevention or treatment of a tumor 30 wherein Her-2/neu is overexpressed.
14. The use of claim 12 or 13, wherein the tumor is an adenocarcinoma.
15. The use of claim 14, wherein the tumor is selected from breast cancer, ovary cancer, uterus cancer, stomach cancer and lung cancer.